

What is Claimed is:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Currently Amended) A method for brightening a chemical pulp comprising the steps of:

mixing pulp containing less than 18% lignin with hydrogen peroxide, an aqueous solution of sodium silicate, wherein sodium silicate comprises sodium oxide (Na_2O) and silica (SiO_2); an alkali agent added in an amount sufficient to maintain the pH of said solution at least about 8; and a

magnesium compound which dissociates in said solution to form $\text{Mg}(\text{OH})^+$ cations, wherein said magnesium compound is added in an amount to achieve, along with any other dissociated magnesium, an $\text{Mg}:\text{SiO}_2$ mass ratio of between about 1:~~15~~10 to about 1:~~23~~, to form a mixture, and wherein at least 25% of the silicates SiO_2 have has a molecular weight of at least 10,000 Daltons; ~~and~~

pressurizing said mixture with an oxygen-containing gas; and

heating said mixture to allow said mixture to react to cause a portion of said lignin to degrade.

21. (Cancelled)

22. (Cancelled)

23. (Currently Amended) A method in accordance with claim ~~22~~ 20 wherein the oxygen partial pressure is in the range of between about 0.38 to about 1.48 MPa.

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)